3.4 Pedestrian Movement

Given the proximity of Euston Station as a key transport interchange supported by nearby stations at Warren Street and Great Portland Street, Regent's Place sees large amounts of people movements per day.

Given the high number of pedestrians, of which would increase with the Proposed Development, the proposed scheme has carefully reviewed the existing conditions around the Euston Tower and identified that increasing pedestrian comfort levels (PCL) and ground floor permeability are important factors to consider for the Proposed Development.

To further inform this aim, Velocity Transport Planning has reviewed and surveyed the existing footfall so that the design team can accurately assess the impact a new ground plane would have on the immediate and surrounding areas.

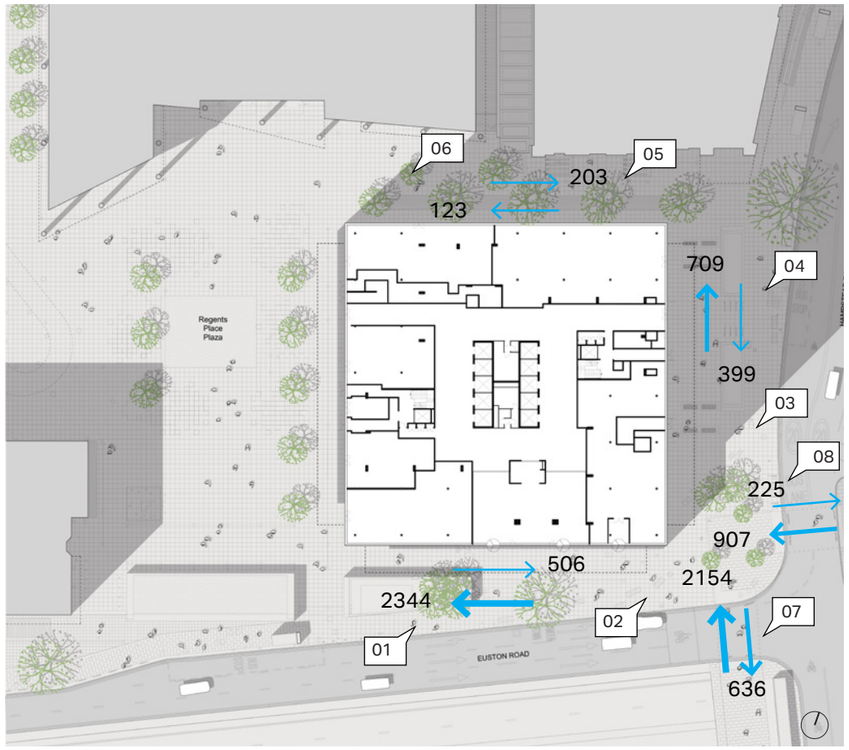
Pedestrian flow data collected in a survey undertaken in April 2023 has been used to establish an existing baseline for pedestrian flows surrounding the site. The survey captured Euston Road (northern footway), Hampstead Road (western footway), Brock Street (north of the site) and the pedestrian crossings on Hampstead Road (northbound) and Euston Road (off-slip).

The existing AM and PM pedestrian flows are shown in the plans opposite.

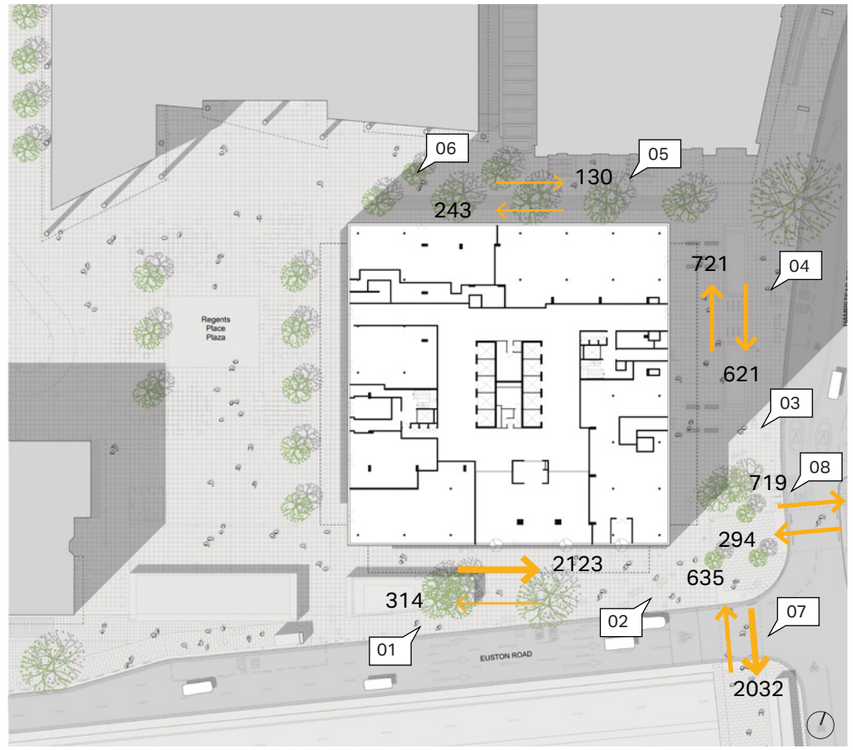
A PCL (Pedestrian Comfort Level) assessment has been undertaken of existing flows on the surrounding footways during the peak pedestrian hour, to asses the level of comfort based on the level of crowding a pedestrian experiences when walking along a street. PCL designates a score (from A+ to E) whereby a PCL A provides a pleasant walking experience, and a PCL E is uncomfortable and restricted.

The existing footway widths provide comfortable pedestrian conditions, with the lowest score of an A. The two signalised pedestrian crossings on Euston Road and Hampstead Road have PCL scores of A.

For more details on the proposal's approach to pedestrian matters, please refer to the Transport Assessment submitted by Velocity in support of this application.



Drawing - Existing Pedestrian Flows - AM Peaks



Drawing - Existing Pedestrian Flows - PM Peaks

AM Peak Flow
PM Peak Flow

01 Reference number

Ref.	Link	Link Type	Peak Hour Flow	Clear Footway Width	PCL
1	Euston Road	Office and Retail	2176	8.8m	A
2	Euston Road	Office and Retail	2851	7.8m	A
3	Hampstead Road	Office and Retail	1108	17.4	A+
4	Hampstead Road	Office and Retail	1108	13.4m	A+
5	Brock Street	Office and Retail	326	7.6m	A+
6	Brock Street	Office and Retail	326	11.6m	A+
7	Euston Road Crossing	Office and Retail	2929	6.7m	B+
8	Hampstead Road Crossing	Office and Retail	1192	6.5m	A-

Table - Existing pedestrian comfort levels

3.5 Cyclist Movement

Cycling has become an increasingly important consideration in building design over the past few years, as the numbers of people cycling as part of their transport, exercise or leisure routines has continued to grow.

This increase is especially noticeable throughout central London, where cycling is seen as a healthy and efficient way to replace tube or bus journeys - something that has become much more relevant in response to the COVID-19 pandemic. Cycling has the potential to substitute for short car trips, particularly those less than five kilometres in length however many people will cycle longer distances.

The Proposed Development at Euston Tower has considered cycling from the outset of the design process and has made the delivery of a best-in-class cyclist experience an intrinsic part of the development. The diagram opposite illustrates both the site and some of these networks.

The cycling provisions proposed as part of the Euston Tower scheme are illustrated in more detail in later chapters of this document, and underline both British Land and the Design Team's commitment to providing world class cycling facilities designed around cyclists and their needs.

Many roads near to the site are marked as suitable or signed for cyclists and include lanes and advanced stop lines (ASLs) at each arm of the Hampstead Road junction / A501 Euston Road signalised junction. Hampstead Road provides cycle lanes, whilst Longford Street / Drummond Street are quieter local roads recommended for cyclists. In addition, to the south, there is a network of routes that are signed or marked for cyclists and connect the site with Marylebone, Fitzrovia and central London.

The development is conveniently located in terms of cycle accessibility with a number of local facilities and amenities accessible by cycle using the network of cycle routes in the vicinity of the site. There are a number of local cycle routes within proximity of the site, the nearest being Cycleway 27, which provide connections between Hammersmith in the west to Clapton and Homerton in the east via Paddington, Angel, Islington and Hackney.

Diagram - Existing and proposed cycle networks

3.6 Highways & Transport

Euston Tower sits at the corner of Euston Road (A501) to the South and Hampstead Road to the East.
It is bordered on the north by Brock Street and by Regent's Place Plaza to the west.

Servicing and vehicle movements around the site have been an important consideration in the design of the Proposed Development. Currently, the Euston Tower servicing and delivery is provided through a shared basement running under the entire Regent's Place Estate accessed via a ramp directly from Longford Street to the North – this basement includes a shared loading bay providing access to various buildings within the Regent's Place Estate including the Euston Tower.

Cycle

There are a number of publicly available Sheffield stands in the surrounding public realm, providing 78 cycle parking spaces. Brompton lockers are also provided within Regent's Square, allowing pedestrians to rent Brompton bikes for £5, up to 24 hours at a time.

Rail and Underground

The Site has a PTAL rating of 6b, indicating 'excellent' transport connectivity. The Site is mainly served by Warren Street Underground Station (south), Euston Square Underground Station (east) and Great Portland Street Underground Station (west). There are also several bus routes that serve the site along Euston Road (south) and Hampstead Road (east).

Bus

The Site is located in close proximity to a comprehensive level of bus provision. The closest bus stops are situated on Hampstead Road, to the east of the site, which provide access to bus routes 24, 27, 29 and 134. Euston Road bus stop to the south of the Site provides access to bus routes 18, 30 and 205. The local bus stops provide access to 148 bus services per hour.

For more details on the proposal's approach to highways and transport, please refer to Chapter 10: Technical Summary as well as the Transport Assessment submitted by Velocity in support of this application.

Diagram - Existing highways network

3.7 Daylight & Sunlight

Throughout the design of the Proposed Development, detailed technical analysis has been undertaken in order to test and limit the adverse daylight and sunlight effects of the Proposed Development on the surrounding residential properties.

Technical analysis has been undertaken by reference to the BRE Guidelines 2022. The scheme has undergone an iterative process of massing optimisation that has informed the final massing for which permission is sought.

The calculations used to conduct the analysis are based on a 3D contextual model created from surveyed point cloud data, and site photographs alongside the submitted drawings.

The following 28 residential properties have been included within the scope of the analysis:

1. 17-33 William Road
2. Schafer House, University College
3. 164-166 Drummond Street
4. 175 Drummond Street
5. 40-60 Hampstead Road
6. 1-6 Tolmers Square
7. 183 North Gower Street
8. Euston Square Hotel
9. Warren Court Euston Road
10. Lizmans House, 321 Euston Road
11. 63-68 Warren Street
12. 62 Warren Street
13. 60-61 Warren Street
14. 59 Warren Street
15. 58 Warren Street
16. 57 Warren Street
17. 56 Warren Street
18. The Grafton Hotel
19. 8 Warren Street
20. 9 Warren Street
21. 10 Warren Street
22. 11 Warren Street
23. 12 Warren Street
24. 13-14 &118-120 Whitfield Street
25. 15 Warren Street & 161 Whitfield Street
26. 16 Warren Street
27. 17 Warren Street
28. Duches House, 18-19 Warren Street

For more detailed information, please refer to “Chapter 10.6 - Daylight & Sunlight Analysis” as well as the Daylight, Sunlight and Overshadowing report prepared by Point2 submitted as part of this application.

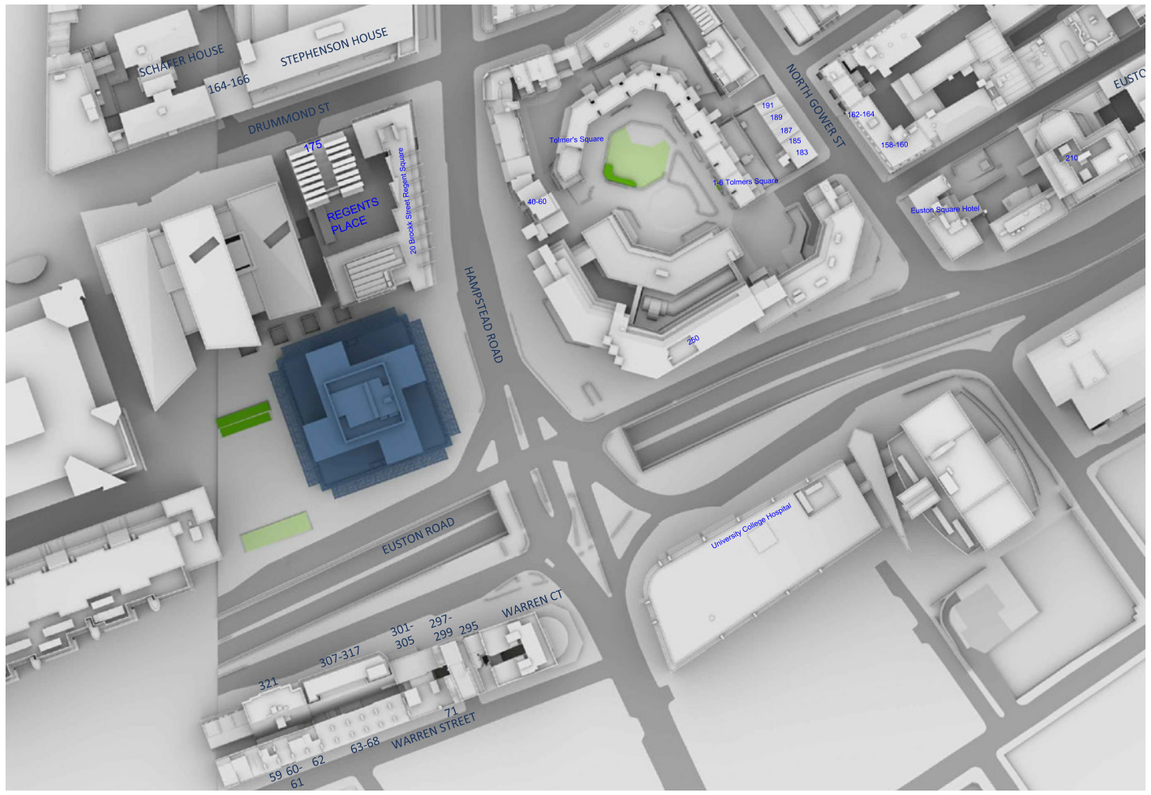


Diagram - Plan view of existing Euston Tower in DLSL model

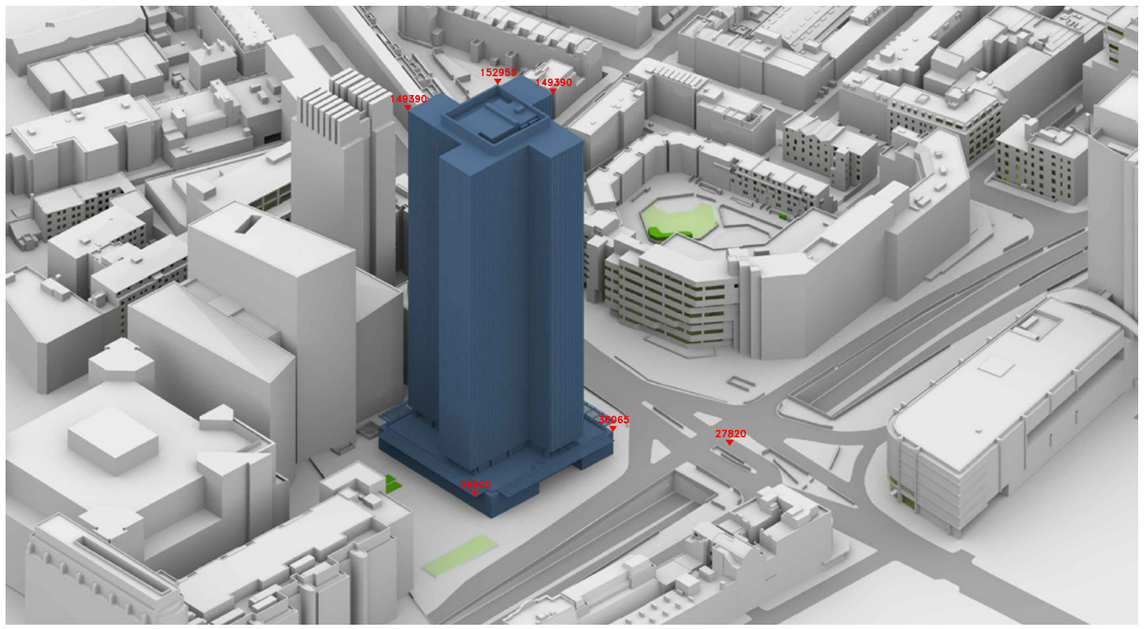


Diagram - Axonometric view of existing Euston Tower in DLSL model

3.8 Wind Conditions

Arup's Wind Engineers have been working with the design team throughout the design process to provide both qualitative and quantitative assessments and advice. The addition of any new tall building into the built environment will alter the wind environment around it. Good wind microclimate conditions are necessary for creating outstanding public spaces for all.

Adverse wind effects can reduce the quality and usability of outdoor areas, and lead to safety concerns in extreme cases. Physical wind tunnel testing (undertaken by Arup and RWDI) and computational fluid dynamics modelling (undertaken by Arup) have been used to develop the architectural form and associated public realm in line with Microclimate guidelines. Images from this testing are included opposite.

The baseline conditions across the existing site and the surroundings have been defined using wind tunnel testing to provide a detailed, quantitative assessment. Mean and peak wind speeds have been measured for both the windiest (normally winter) and summer seasons.

Some of the key considerations relating to wind mitigation for the Proposed Development are outlined below:

Height: Any new massing above the existing surroundings can cause volumes of air to be deflected down as well as up and around.

Building plan shape: Aligning any new building with prevailing winds may be helpful.

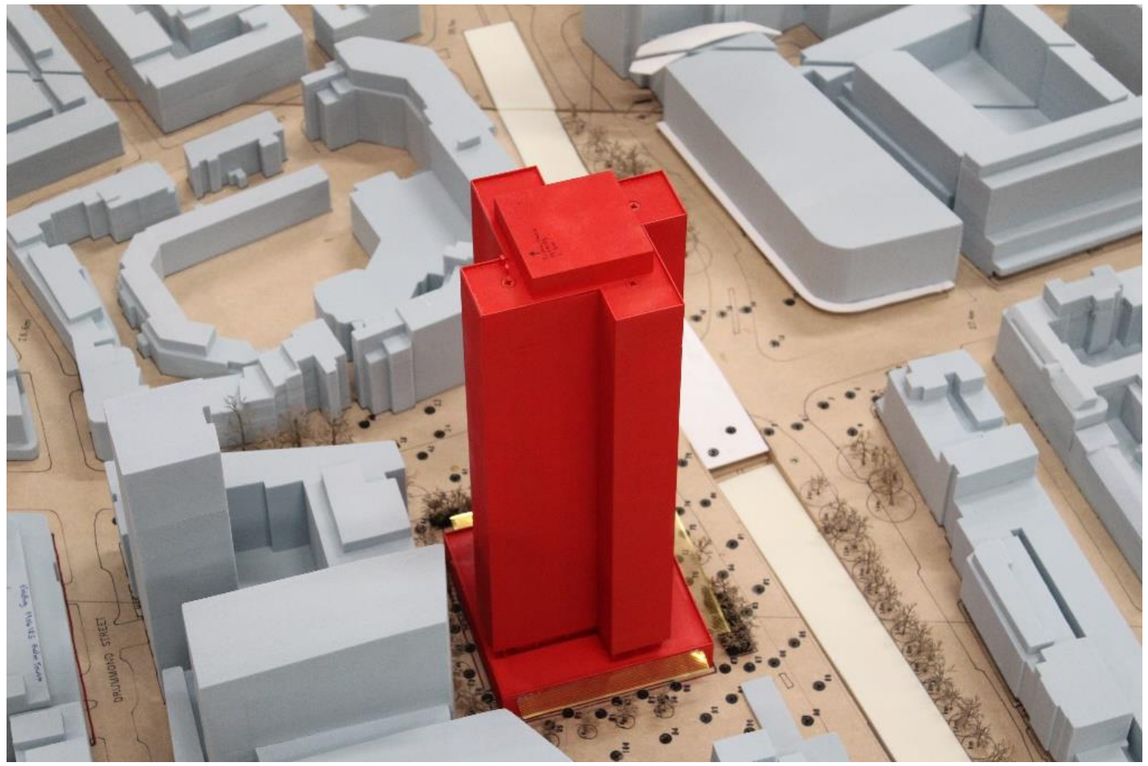
Steps/podiums: May help keep winds above ground level.

Canopies: May be louvred and used with podiums to reduce wind from reaching ground level without throwing the wind issues off-site. Louvred canopies are sometimes highly effective at redirecting wind. Louvres may be horizontal, angled or vertical.

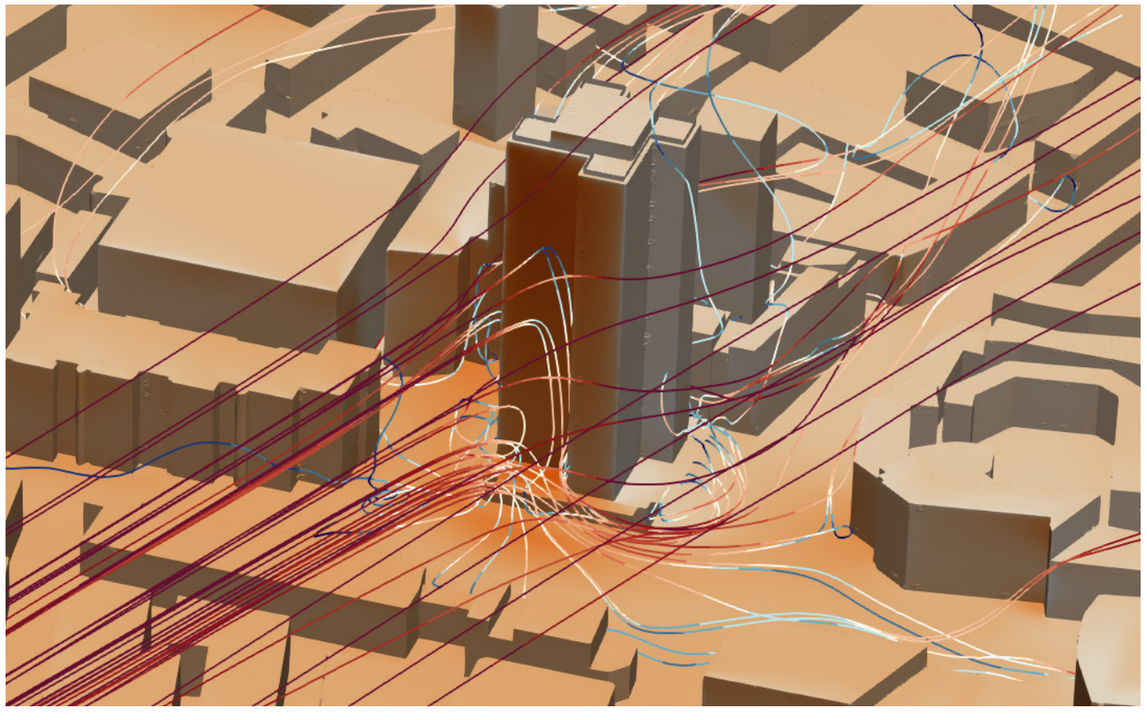
Ground-level mitigations: This could include trees, shrubs, public art, way-finding signs or other screen elements.

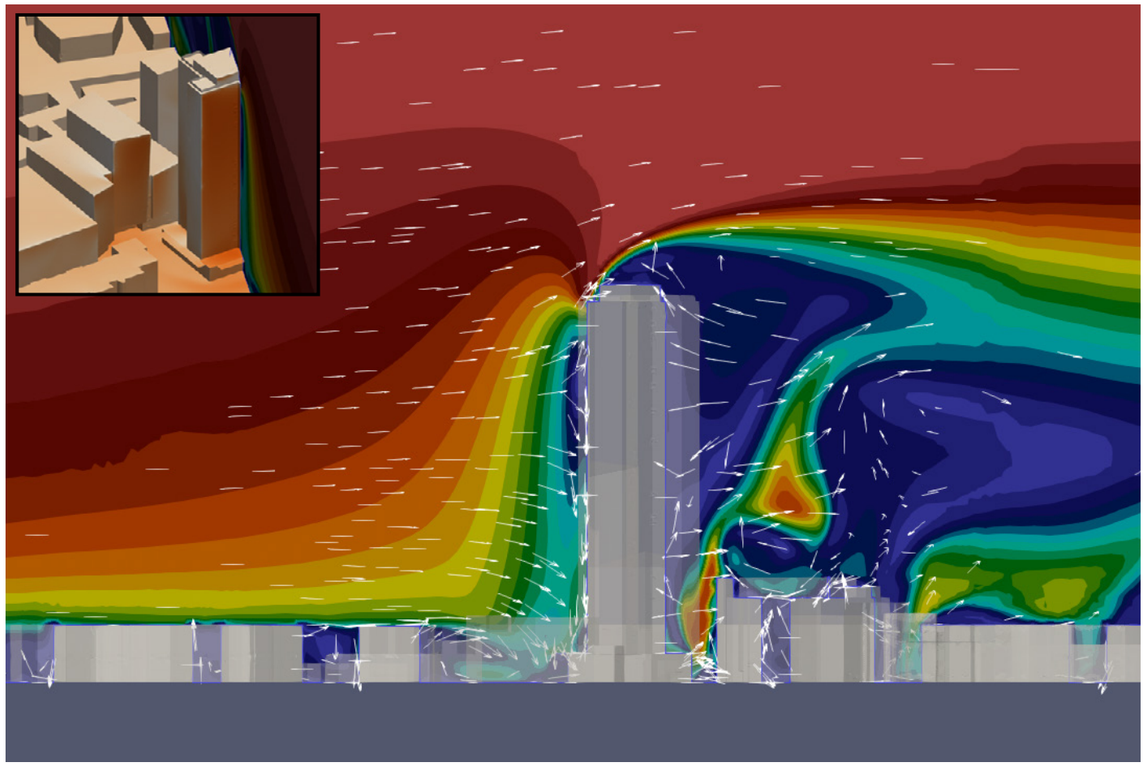
A comparison of the existing and proposed site wind conditions can be found in Chapter 10.1 Designing for Wind.

Photograph - Euston Tower wind mitigation canopy, installed early 2000s



Photograph - Euston Tower wind tunnel testing





Digital model - CFD testing the existing building demonstrating pressure differentials and downdraft